CLAIMS

What is claimed is:

SUBA1) 1. A method for decoding compressed video comprising:

reading a stream of compressed video into a memory, said video having multiple pictures, each picture having one or more independent elements;

assigning, via a first processor of a group of processors sharing said memory, at least one independent element per processor to be decoded by the processors in parallel; and

decoding the independent elements of the video in parallel.

2. The method of claim 1, wherein the independent elements include slices.

SUBA2) 3. The method of claim 2, wherein assigning the independent elements includes assigning a varying number of slices to individual processors.

4. The method of claim 3, wherein assigning the independent elements includes assigning a comparable work load to the processors.

5. The method of claim 4, wherein assigning the independent elements includes placing in memory as a local variable, for each processor, the slices to be decoded by a respective processor.

6. The method of claim 5, wherein each slice includes at least one macroblock.

7. The method of claim 6, wherein said video is encoded in MPEG.

8. The method of claim 7, wherein the method of decoding is performed in real-time.

9. A computer-readable medium having stored thereon a set of instructions, said set of instruction for decoding compressed video, which when executed by a processor, cause said processor to perform a method comprising:

reading a stream of compressed video into a memory, said video having multiple pictures, each picture having one or more independent elements;

assigning, via a first processor of a group of processors sharing said memory, at least one independent element per processor to be decoded by the processors in parallel; and

decoding the independent elements of the video in parallel.

10. The computer-readable medium of claim 9, wherein the independent elements include slices.

11. The computer-readable medium of claim 10, wherein assigning the independent elements includes assigning a varying number of slices to individual processors.

12. The computer-readable medium of claim 11, wherein assigning the independent elements includes assigning a comparable work load to the processors.

13. The computer-readable medium of claim 12, wherein assigning the independent elements includes placing in memory as a local variable, for each processor, the slices to be decoded by a respective processor.

14. The computer-readable medium of claim 13, wherein each slice includes at least one macroblock.

15. The computer-readable medium of claim 14, wherein said video is encoded in MPEG standard.

16. The computer-readable medium of claim 15, wherein the method of decoding is performed in real-time.

17. A computer system comprising:

a plurality of processors ;

a memory coupled to said plurality of processors;

a first unit of logic to read a stream of compressed video into said memory, said video having multiple pictures, with each picture having one or more independent elements; and

said first unit of logic further assigns, via a first processor of said group of processors sharing said memory, at least one independent element per processor to be decoded by the processors in parallel.

18. The computer system of claim 17, wherein the independent elements include slices.

SUBA4) 19. The computer system of claim 18, wherein said first unit of logic assigns a varying number of slices to individual processors.

20. The computer system of claim 19, wherein said first unit of logic assigns a comparable work load to the processors.

21. The computer system of claim 20, wherein said first unit of logic places in memory as a local variable, for each processor, the slices to be decoded by a respective processor.

22. The computer system of claim 21, wherein each slice includes at least one macroblock.

23. The computer system of claim 22, wherein said video is encoded in MPEG standard.

24. The computer system of claim 23, wherein system computer system decodes said video in real-time.